

# Atlantic Richfield Company

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August 9, 2011

## **CERTIFIED – RETURN RECEIPT REQUESTED**

Ms. Jere Johnson  
Remedial Project Manager  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street, SFD-9-1  
San Francisco, CA 94105

**Subject: July 2011 Monthly Report, Yerington Mine Site, Lyon County, Nevada:  
Administrative Order for Remedial Investigation and Feasibility Study (RI/FS),  
CERCLA Docket No. 9-2007-0005; Administrative Order on Consent, CERCLA  
Docket No. 09-2009-0010**

Dear Ms. Johnson:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared this July 2011 monthly report for RI/FS and removal action activities at the Yerington Mine Site (Site).

## **July 2011 Activities**

### Site Security and O&M Activities

- Continued routine Site O&M, security and bird deterrent activities. Security cameras at various locations (Main and Arimetco gates, entrances to buildings) indicated no activity of concern. Began replacing "Danger - Keep Out" signs on perimeter fencing that have been damaged.
- The BirdGard® towers remained active around the inactive and pumpback well system (PWS) evaporation ponds. The two "Wind Dancers" remained active. Longer days required that the bird deterrent patrol schedule be adjusted to cover sunrise/sunset hours. New bird deterrent flags were received for locations where the "Wind Dancers" cannot be hooked up to electrical power.
- Water was absent from the PWS evaporation pond cells: North Cell = 0.0 feet; Middle Cell = 0.00 feet; South Cell 0.00 feet. Accumulated precipitation in the cells was too shallow to measure.
- Arimetco Heap Leach Pad (HLP) Fluid Management System (FMS) pond levels: Phase 1 Pond = 3.0 feet; FMS Pond = 7.00 feet; VLT Pond = 4.25 feet; Slot 2 Pond = 12.5 feet. Approximately 481,039 gallons of solution were transferred from the VLT Sediment Pond (VLTSP) to the Arimetco FMS Evaporation Pond, and approximately 1,829 gallons of solution were transferred from the Arimetco Slot Sediment Pond (SSP) to the Arimetco FMS Evaporation Pond. No solution was transferred from the Phase 1 Pond to the Arimetco FMS Pond. See attached data.
- Approximately 58,417 gallons of solution were recorded to have pumped from the leak detectors (approximately 284,487 gallons of solution has been pumped from the leak detectors since January 1, 2011). These values are likely to be about 20,000 too high, given historic volumes from the Slot Pond ditch, (SD1) leak detector, which went out of calibration in July. Arimetco VLT and Slot Pond weir flows were 398,161 and 266,569 gallons, respectively. These volumes equate to approximately 8.6 and 5.8 gallons per minute (gpm), respectively. See attached data.



## **July 2011 Activities - Continued**

### Site Security and O&M Activities - Continued

- Installed and calibrated a new weir in the pipe that flows to the FMS Pond to measure drain-down from the Arimetco Phase III HLPs.
- A leak in the gasket and a crack in the inlet pipe was found during an inspection of the Phase 1 Pond. The pump was removed from service and will be replaced with a new pump, which was ordered. The Slot Pond pump was inspected, the motor was not operating properly, and the pump was taken out of service until repairs can be completed.
- Participated in a conference call with EPA on July 6 to discuss storage capacity and related alternatives for the Arimetco FMS.
- Received the *Public Review Draft Feasibility Study (FS) for Arimetco Facilities Operable Unit 8 Heap Leach Pads and Drain-Down Fluids* dated July 2011, and initiated a review of the draft FS.

### Other Site Activities

- Singatse Peak Services (SPS) personnel worked in their core storage area, and initiated core drilling activities in the open pit.
- Joe Sawyer and other NDEP staff met with SPS on July 15 and 27.
- B.V. Nevada continued demolition and salvage activities.
- ARC and the Mason Valley Fire Department, evaluated a helicopter landing area with Care Flight (an aerial ambulance service) personnel on July 25.
- Initiated the aerial mapping/photogrammetry survey, with the placement of most survey panels on the ground by July 31.

### Site Characterization Activities

- Site-wide monthly groundwater elevation measurements were obtained July 25-28.
- A pit lake water elevation of 4225.64 feet amsl was recorded on July 27 from the pressure transducer, an increase of 0.15 feet since June 29, 2011. The pit lake level has risen 4.13 feet since July 27, 2010. The pit lake pressure transducer was relocated on July 7 to a new location 25 feet to the south and the post holding the data logger and the solar cell was re-located approximately 100 feet to the southwest.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation. The bi-annual calibration for weather stations at AM-1, AM-3 and AM-6 was performed July 6-7.
- Two residences (DW-77 and DW-184) requested to be added to the domestic well sampling program. Receipt of signed access agreements from these domestic well owners is pending.
- No changes to the Bottled Water Program occurred during July.
- Provided 2Q 2011 domestic well data to EPA for distribution to well owners on July 21. Continued compilation of the 2Q 2011 domestic well data for inclusion in the 2Q 2011 DWMR.
- Prepared for the 3Q 2011 groundwater monitoring and 3Q 2011 domestic well monitoring events.
- Participated in a conference call on July 27 to discuss EPA comments on the Draft 2011 On-Site Monitor Well Installation Work Plan (Work Plan). Prepared responses to EPA comments on, and initiated revisions to, the Work Plan.
- Completed pre-field activities associated with the 2011 monitor well installation program, including the preparation of drill pads and the application of dust suppressant polymer to five drill pad locations within and around the Process Areas. The access agreement for installing a pit lake monitor well to be located on Tibbals property had not been signed and returned by July 31.
- Continued the compilation of field and laboratory data for inclusion in the Data Summary Report for the 2010 Well Installation and Ag Field Characterization investigations.

## **July 2011 Activities - Continued**

### Site Characterization Activities - Continued

- Drilling personnel received on-Site safety training on July 19, and the 2011 drilling program started on July 20 at locations B/W-70 (drilled to a depth of 162 feet) and B/W-71 (drilled to a depth of 126 feet). Two additional drill rigs arrived on the Site on July 26 and, after receiving safety training, began drilling on July 27 at locations PA-MW-1 (drilled to a depth of 57 feet) and PLMW-2 (drilled to a depth of 132). Six depth discrete zonal samples were collected (4 from B/W-70 and 2 from B/W-71). A summary of zonal sample collection activities is attached.
- Continued the evaluation of available hydrologic tracer data obtained pursuant to the 2010 Monitor Well Installation and Ag Field Characterization programs.
- Continued the compilation of data for the Background Groundwater Quality Assessment for inclusion in a future Background Investigation Work Plan, as requested by EPA. Evaluated the applicability of various statistical methods to assess background concentrations in groundwater.
- Completed and submitted the Draft Aquifer Test Work Plan on July 8, and participated in a conference call with EPA and project stakeholders on July 28 to discuss the Work Plan.
- Continued preparations for the laboratory phase of the aquifer solids testing program including an evaluation of methods to separate <200 mesh materials and communications with EPA regarding aquifer solids test methods.
- Submitted the revised Technical Memorandum - Process Areas (OU-3) Sub-Surface Utility and Dry Well Investigation Results for Phase I Activities (Revision 1) and associated responses to EPA comments on July 22. The revised technical memorandum includes additional geophysical surveys and a sampling and analysis plan for soils associated with buried pipelines.
- EPA transmitted a letter dated July 20, 2011 indicating it had completed a final review of, and had no further comments on, the Baseline Human Health Risk Assessment for the Inhalation Pathway - Revision 1 dated February 25, 2011. The HHRA was subsequently modified in response to EPA comments, which were addressed by ARC on April 1 and 5, 2011.
- Participated in a conference call to discuss the Conceptual Site Model (CSM) with EPA and Yerington Paiute Tribe (YPT) on July 21, and uploaded the complete CSM - Revision 4 dated January 28, 2011 to the EPA website on July 27 for EPA and YPT review.
- Completed the copying of Site archive materials (Anaconda and Arimetco operating information).
- Continued routine database management activities.
- Continued Site wildlife surveys and wildlife observation reports.

### AOC Removal Actions

- Implemented the Dust Suppression Plan (DSP) for the Inactive Evaporation Ponds during the week of July 25 by applying polymer to all of the small areas of excavated soils with radiological contamination around the former precipitation plant in the Process Areas. Initiated polymer application in the southern portion of the Unlined Evaporation Pond (UEP) on July 28, but terminated the application when the equipment became stuck in the pond sediments. Initiated discussions with the DSP sub-contractor (Envirotac) to develop alternative methods of polymer application in the UEP. In addition to the UEP, polymer will be applied to the W-3 Dump Leach Surge Pond (part of the Process Areas radiological soils removal action) and to the Lined Evaporation Pond (LEP).
- Received suggested minor text edits from EPA on July 20 for the revised Cover Materials Characterization Data Summary Report, which was submitted to EPA on June 10, 2011.
- Continued the compilation of data for inclusion in the Sub-Area A Sub-Surface Investigation Data Summary Report, performed as part of the Sub-Area A interim cover removal action.

## **Planned August/September 2011 Activities**

### Site Security and O&M Activities

- Continue routine Site O&M, security and bird deterrent activities.
- Install the new bird deterrent flags and replace the Phase 1 Pond pump.
- Repair the liner in the south cell of the PWS evaporation pond.
- Continue calibration of instrumentation installed inside the 14-inch diameter HDPE pipe from the Arimetco Phase III Mega Sumps to the Arimetco FMS Pond.
- Continue to discuss Arimetco FMS improvements and repairs with EPA. Continue to review the draft FS for OU-8, and submit comments to EPA when complete.

### Site Characterization

- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.
- Continue groundwater elevation, pit lake water level monitoring and meteorological monitoring.
- Continue the Bottled Water Program.
- Finalize and submit the 2Q 2011 Groundwater Monitoring and Domestic Well Monitoring Reports. Conduct the 3Q 2011 monitor well and domestic well monitoring events.
- Complete and submit the data summary report for the 2010 Monitor Well and Ag Fields Characterization programs.
- Upon receipt of EPA comments, submit the revised Aquifer Test Work Plan and associated responses to EPA comments. Initiate plans for performing the aquifer test (e.g., conveyance of water to the PWS evaporation pond and performance of the down-hole video survey of the agricultural supply well).
- Continue the 2011 On-Site Monitor Well installation program. Address the pit lake monitor well location access agreement or re-locate the monitor well to another suitable location on the west side of the pit. Submit the revised On-Site Monitor Well Work Plan and final responses to EPA comments.
- Continue the evaluation and compilation of available hydrogeologic and groundwater chemical data in Mason Valley, and hydrologic tracer data, in support of the Background Groundwater Quality Assessment. Submit the Background Groundwater Quality Assessment report.
- Continue the aquifer solids testing program.
- Meet with EPA and project stakeholders on August 16-17 to discuss Site-Wide Groundwater RI activities, including 2010 results and upcoming investigations.
- Pending EPA approval of the Phase 2 scope of work, initiate this next phase of geophysical surveys and related sub-surface utility investigations in the Process Areas.
- As requested by EPA, continue to discuss the current version of the CSM.
- Continue the aerial mapping/photogrammetry survey to improve on-Site and off-Site base maps for RI/FS purposes including panel placement completion and survey flights (the flight schedule will be dependent on aerial survey contractor availability).

### AOC Removal Actions

- Pending the resolution of polymer application methods and pond sediment conditions for access, continue dust suppression activities on the inactive evaporation ponds (LEP and UEP) and the W-3 Dump Leach Surge Pond.
- Continue to compile characterization data for inclusion in the Sub-Area A Sub-Surface Investigation Data Summary Report, continue vadose zone modeling and submit the DSR.

If you have any questions or comments about the July 2011 monthly report, please contact me at (714) 228-6774 or via e-mail at [jack.oman@bp.com](mailto:jack.oman@bp.com).

Sincerely,



Jack Oman  
Project Manager

Attachment

cc: Dave Seter, EPA – via electronic mail  
Jacquelyn Hayes, EPA – via electronic mail  
Roberta Blank, EPA – via electronic mail  
Andrew Helmlinger, EPA – via electronic mail  
Tom Dunkelman, EPA – via electronic mail  
Greg Lovato, NDEP – via electronic mail  
Tom Olsen, BLM – via electronic mail  
Dan Newell, City of Yerington – via electronic mail  
Phyllis Hunewill – via electronic mail  
Virgil Arellano, Lyon County Commissioner – via electronic mail  
Richard Faber, Lyon County Facilities Engineering – via electronic mail  
Tom Grady, Nevada State Assembly – via electronic mail  
Justin Whitesides, YPT – via electronic mail  
Chairwoman Howard, YPT – via electronic mail  
Dietrick McGinnis, McGinnis and Associates – via electronic mail  
Tom Bowden, Ridolfi, Inc. – via electronic mail  
Chairwoman McFalls, WRPT – via electronic mail  
Vicky Moyle, WRPT – via electronic mail  
Ron Halsey, Atlantic Richfield Company – via electronic mail  
James Lucari, Atlantic Richfield Company – via electronic mail  
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Rich Curley, Curley and Associates, LLC – via electronic mail  
Bill Duffy, Davis Graham & Stubbs – via electronic mail  
Tom Patton, Singatse Peak Services, LLP – via electronic mail  
George Eliopulos, Singatse Peak Services, LLP – via electronic mail  
David Peri, Peri and Sons – via electronic mail  
Ken Greene, CH2M Hill – via electronic mail  
Victor Early, Tetra Tech – via electronic mail  
Colin Lee, Tetra Tech – via electronic mail  
Peggy Pauly, YCAG – via electronic mail  
Lyon County Library System Central